

ABSTRACT

The invention relates to a pyrophosphoric acid bath for use in cyanogen-free copper-tin alloy plating that contains an additive (A) composed an amine derivative, an epihalohydrin and a glycidyl ether compound with ratios of epihalohydrin to glycidyl ether compound being 0.5-2 to 0.1-5 on mol basis, per 1 mol of the amine derivative, has a pH of 3 to 9, and optionally contains an additive (B) composed of an organic sulfonic acid and/or an organic sulfonic acid salt, and to a copper-tin alloy coating obtainable by using the bath. The invention provides a pyrophosphoric acid bath for use in copper-tin alloy plating of the cyanogen-free type utilizable on an industrial scale, particularly, capable of performing uniform treatment to exhibit low defective product generation rates even with the current density being incessantly changing between a high state and a low state, as a barrel plating method, and a copper-tin alloy coating obtainable by using the bath.